

The equity premium (A Puzzle)

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The paper identified general equilibrium models placed upon the average returns of equity and Treasury bills that were found to be strongly violated by the U.S. data in the 1889-1978 period. This result is robust to model specification and measurement problems, so they observed the historical large average equity return and the small average risk-free return.

The research team studied a class of competitive pure exchange economies for which the equilibrium growth rate process on consumption and equilibrium asset returns were stationary. Attention is restricted to economies for which the elasticity of substitution for the composite consumption good between the year t and year $t + 1$ was consistent with findings in micro, macro and international economics. In addition, the economies were constructed to display equilibrium consumption growth rates with the same mean, variance and serial correlation as those observed for the U.S. economy in the 1889-1978 period. They emphasize that the analysis was not an estimation exercise, which was designed to obtain better estimates of key economic parameters, using quantitative theoretical exercise to address a very particular question. The data used in this study consists of five basic series for the period 1889-1978.

Furthermore, in this paper they employed a variation of the economy, asset prices, and returns in a pure exchange model (Lucas 1978). They assumed that the growth rate of the endowment follows a Markov process. In contrast, the assumption in Lucas' model that the endowment level follows a Markov process. Their assumption, which required an extension of competitive equilibrium theory, enables us to capture the non-stationarity in the consumption series associated with the large increase in per capita consumption that occurred in the 1889-1978 period. The results were not sensitive to increased persistence in the growth rate, that was to increase in $\sim$, implies low frequency movements or nonstationarities in the growth rate do not increase the equity premium. Indeed, by assuming stationarity, $w \sim$ biased the test towards acceptance.

The security priced in their model did not correspond to the common stocks traded in the U.S. economy. In the model there was only one type of capital, while in an actual economy there was virtually a continuum of capital types with widely varying risk characteristics.

To be concluded, the equity premium puzzle may not be why was the average equity return so high but rather why was the average risk-free rate so low.